

## **REMARKS**

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

### **Claim Amendments**

Claim 1 has been amended based on, e.g., page 9, line 15 and page 10, line 27, where it is clarified that the aliphatic polyester resin is removed by hydrolysis thereof during the washing with alkaline water.

### **Patentability Arguments**

The patentability of the present invention over the disclosures of the references relied upon by the Examiner in rejecting the claims will be apparent upon consideration of the following remarks.

### **Rejection Under 35 U.S.C. § 103(a)**

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Peters et al. (U.S. Patent No. 6,090,860) in view of Shiiki et al. (U.S. Patent No. 6,673,403).

This rejection is respectfully traversed for the following reasons.

### **The Position of the Examiner**

The Examiner takes the position that Peters et al. teach a method of recycling a laminate shaped product including breaking a shaped structure having a laminate structure including at least one barrier layer and a principal resin layer, storing the broken pieces in a moisturizing environment to adjust the moisture content, and washing the broken pieces with alkaline water to remove the barrier layer and recovering the principal resin. The Examiner asserts that Peters et al. teach using a gas barrier layer but does not explicitly teach the barrier layer is aliphatic polyester resin. The Examiner asserts that Shiiki et al. teach that a known gas barrier layer is polyglycolic acid. The Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Peters et al. to use the barrier of

Shiiki et al., because substitution of known barrier layers is within the routine skill of one in the art.

*Applicants' Arguments*

Applicants respectfully disagree with the Examiner's position for the following reasons.

Peters et al. disclose a method of recovering a base plastic (as represented by PET) from a laminate including a gas-barrier coating (e.g., those derived from polyamine, alkanolamine and polyepoxide (as described at col. 14, lines 64-65) on the base plastic, including steps of (1) steam treatment, e.g., for removing label contaminants and/or residual adhesives, and (2) separation removal of the gas-barrier coating by alkali washing (col. 7, lines 8-36). However, the gas-barrier coating is physically separated from the base plastic (col. 5, line 64, et seq.), and not chemically separated, i.e., by hydrolysis, as required by Applicants' amended claims.

Accordingly, assuming *arguendo* that Shiiki et al. disclose a laminate including a gas-barrier layer comprising polyglycolic acid resin (as a representative aliphatic polyester resin used in Applicants' invention) and a principal resin layer comprising PET, the combination of Peters et al. and Shiiki et al. still fails to teach or suggest the method of recovering a principal resin by removal of the aliphatic polyester resin layer **through hydrolysis** thereof.

Further, Peters et al. fail to teach or suggest a steam pre-treatment step effective for reducing the induction period of the hydrolysis of the aliphatic polyester resin, thereby providing an entirely effective method of recycling the principal resin.

Thus, the effective method of recycling a laminate-shaped product of Applicants' claims, based on removal of the aliphatic polyester resin layer by hydrolysis thereof, is not rendered obvious by the teachings of Peters et al. and Shiiki et al. Thus, it is respectfully requested that this rejection be withdrawn.

**Conclusion**

Therefore, in view of the foregoing amendments and remarks, it is submitted the ground of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

Kazuyuki YAMANE et al.

/Amy E. Schmid/  
By 2009.12.31 13:50:49 -05'00'  
\_\_\_\_\_  
Amy E. Schmid  
Registration No. 55,965  
Attorney for Applicants

AES/emj  
Washington, D.C. 20005-1503  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
December 31, 2009